

CALFED POTENTIAL ACTION LIST

E-008768

E-008768

DRAFT COPY

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Restoration of Bay-Delta System Shallow Water (Tidal) Habitat <ul style="list-style-type: none"> -Convert existing leveed lands to tidal action -Protect existing shallow habitat from erosion -Restore tidal action to existing diked wetlands -Reconstruct levees to include shallow water habitat -Fill deep water to produce shallow habitat 				
Restoration of Bay-Delta System Riverine Habitat <ul style="list-style-type: none"> -Reconstruct river banks and shallow areas -Restore and preserve channel islands -Restore natural channel configurations -Modify channel/levee construction practices to include riverine elements 				
Restoration of Bay-Delta System Riparian Habitat <ul style="list-style-type: none"> -Improve and protect degraded riparian habitats -Establish new areas of riparian habitat -Reestablish historic riparian areas -Modify levee maintenance practices -Protect existing riparian habitat 				
Restoration of Bay-Delta System Wetland Habitat <ul style="list-style-type: none"> -Restore, enhance, and create wetlands -Expand wetland acquisition programs -Convert agricultural lands to wetlands -Protect existing wetland habitat 				
Restoration of Bay-Delta System Terrestrial Habitat <ul style="list-style-type: none"> -Protect existing upland habitat -Establish upland habitat on levees -Establish upland habitat on fallowed croplands -Establish oak woodlands on suitable soils -Encourage wildlife-friendly agricultural practices -Preserve agricultural land uses providing habitat -Clean up sites contaminated with toxic substances 				
Implementation of Integrated Habitat Management Programs <ul style="list-style-type: none"> -Establish regional ecosystem restoration guidelines -Implement integrated regional habitat management -Develop cooperative management agreements -Establish mitigation banking program 				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Establishment of Floodways and Meander Belts -Relocate levees to widen floodways -Allow river channels to meander -Acquire Delta islands as overflow areas -Restore floodways as habitat corridors				
Control of Introduced Species -Remove or reduce nuisance species in key habitats -Improve regulation of ballast-water releases -Improve border inspection practices -Inspect for invasions of nuisance species -Modify habitat to favor native species				
Delta Waterfowl Habitat Management -Manage agricultural crops for waterfowl forage production -Improve management of public waterfowl areas -Implement terrestrial predator control programs -Increase sources and availability of wildlife forage				
Restoration of Upstream Anadromous Fish Habitat -Manage flows and temperatures in upstream habitats -Restore and replenish spawning gravels -Restore channel configurations -Restore shoreline habitat conditions -Modify gravel mining practices -Improve floodway drainage to reduce fish stranding				
Improvements for Upstream Fish Passage -Modify passage at upstream dams and other barriers -Modify natural barriers to improve passage				
Restoration of Upstream Riparian Habitat -Restrict livestock grazing in riparian corridors -Revegetate degraded riparian habitats -Protect riparian lands through purchase/easements -Restore flows to dewatered riparian habitats				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Restoration of Upstream Wetland Habitat -Modify floodways to support wetland habitats -Reuse agricultural drainage to create wetlands -Reuse urban wastewater effluent to create wetlands -Manage groundwater recharge for wetland habitat				
Delta Inflow/Outflow/Export Management Actions regarding Delta Inflow -Modify upstream consumptive use -Modify upstream reservoir operations criteria -Modify Delta inflow timing pattern -Provide instream pulse flows for fish passage -Provide instream flows for fish attraction				
Actions regarding Delta Diversions and Outflows -Modify volumes and timing of exports -Modify in-Delta consumptive use -Modify central Delta channel operations -Modify export operations criteria -Establish a Delta watermaster to Manage flows -Use real-time monitoring and adaptive management				
Modification of Diversion Timing Patterns -Modify diversion timing of in-Delta diversions -Modify diversion timing of export diversions -Coordinate SWP/CVP diversion timing -Modify diversion timing through Montezuma Salinity control Gate -Use real-time monitoring and adaptive management				
Increased Rates of Diversion Capacity -Obtain approvals for expanded export capacities -Enlarge export pumping capacities -Increase diversion capability at Red Bluff diversion Dam				
Acquisition of Long-Term Water Supplies for Fish and Wildlife -Acquire water to augment instream flows -Obtain shifts in timing of instream flows -Obtain shifts in diversion timing patterns -Acquire water for refuge habitat use -Modify water law to Establish instream rights				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Installation and Improvement of Fish Screens <ul style="list-style-type: none"> -Improve screens at Delta export pumps -Improve other existing fish screen systems -Install screens on other in-Delta diversions -Install screens on upstream diversions -Consolidate and screen existing small diversions -Enforce screening requirements 				
Improvement of Bay-Delta System Fish Migration <ul style="list-style-type: none"> -Install barriers to block fish movement into Old river -Install barriers to keep fish in Sacramento river -Install barriers to divert fish from Sacramento river to western distributaries -Operate fish barrier on San Joaquin river at Merced river confluence in fall -Provide instream pulse flows for fish passage -Provide instream flows for fish attraction 				
Improvement of Fish Salvage Operations <ul style="list-style-type: none"> -Improve design of salvage facilities -Improve operation of salvage facilities -Improve fish hauling and release procedures 				
Removal and Control of Aquatic Predators <ul style="list-style-type: none"> -Harvest predators at Delta export pumps -Harvest predators in upstream habitats 				
Fish Hatchery Operations <ul style="list-style-type: none"> -Expand hatchery capacities -Construct new hatcheries on the San Joaquin river -Improve hatchery operations -Reduce hatchery effects on wild fish populations -Implement tagging of hatchery-bred fish -Establish new captive breeding programs 				
Fish Harvest Management <ul style="list-style-type: none"> -Improve regulation of commercial take -Improve regulation of recreational take -Improve enforcement of Harvest regulations 				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Desalination <ul style="list-style-type: none"> -Expand desalination of Southern California supplies -Expand desalination of San Joaquin Valley supplies -Improve desalination technologies and cost -Educate users about desalination feasibility 				
Water Conservation <ul style="list-style-type: none"> -Increase use of district-wide conservation practices -Increase use of on-farm conservation practices -Increase use of municipal conservation practices -Increase use of industrial conservation practices -Implement financial incentive policies -Implement conservation-oriented rate structures -Educate users about conservation technologies 				
Water Reclamation <ul style="list-style-type: none"> -Recharge groundwater with reclaimed water -Use reclaimed water for agricultural irrigation -Reclaim saline agricultural drainage water -Recycle and treat water for potable Reuse -Use reclaimed water for nonpotable urban uses -Use reclaimed water for landscape irrigation -Use reclaimed water for power plant cooling -Use reclaimed water for industrial processes -Use reclaimed water to repel salinity intrusion -Improve reclamation technologies and cost -Educate public about water reclamation 				
Land Retirement and Fallowing <ul style="list-style-type: none"> -Encourage land fallowing during drought periods -Develop incentive programs for land retirement -Purchase lands or easements -Retire lands with drainage problems 				
Water Pricing <ul style="list-style-type: none"> -Establish incentives for pricing to reduce demand -Educate users about pricing feasibility -Remove legal obstacles to pricing incentive programs 				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Watershed Management <ul style="list-style-type: none"> -Manage vegetation cover to increase yield -Manage riparian zones to protect water quality -Manage land uses to reduce sedimentation -Modify weather to increase precipitation 				
New or Expanded On-stream Storage <ul style="list-style-type: none"> -Construct new storage facilities south (downstream) of the Delta -Construct new storage facilities north (upstream) of the Delta -Enlarge existing on-stream storage reservoirs -Modify operations of existing on-stream reservoirs 				
New or Expanded Off-stream Storage <ul style="list-style-type: none"> -Construct new storage facilities south (downstream) of the Delta -Construct new storage facilities north (upstream) of the Delta -Construct new storage facilities in Delta -Enlarge existing off-stream storage reservoirs -Modify operations of existing off-stream reservoirs 				
Groundwater Banking and Conjunctive Use <ul style="list-style-type: none"> -Establish incentives for conjunctive use -Modify water Code to encourage conjunctive use -Establish conjunctive use programs -Store groundwater south (downstream) of the Delta -Store groundwater north (upstream) of the Delta -Implement techniques to increase groundwater recharge 				
Improvement of Through-Delta Conveyance <ul style="list-style-type: none"> -Increase capacities of existing east-side channels -Increase flows from the Sacramento river to the central Delta -Modify Delta levees to increase flow cross sections -Construct pump/siphon systems between Delta channels -Expand existing intakes at the Delta export facilities -Construct expanded export intake/forebay pumping system 				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Construction and Improvement of Conveyance Facilities <ul style="list-style-type: none"> -Construct east-side isolated transfer system -Construct west-side isolated transfer system -Construct small isolated transfer facility -Convert Delta islands to storage/conveyance system -Construct conveyance to off-stream storage -Construct conveyance to groundwater storage 				
Changes in Locations of Diversions <ul style="list-style-type: none"> -Relocate Delta export pumps from key habitats -Relocate other in-Delta diversions for more reliable supplies -Consolidate in-Delta agricultural diversions -Relocate upstream diversions from key habitats -Improve diversion designs when relocating 				
Water Transfers <ul style="list-style-type: none"> -Modify water Code to ease transfers -Improve procedures for transfer permitting -Coordinate diversion and conveyance of transfers 				
Long-Term Planning for Drought Contingencies <ul style="list-style-type: none"> -Increase water storage capacities at user locations -Establish incentives for long-term planning -Conduct Integrated Resources Planning -Establish incentives for long-term conservation -Develop alternate supplies for drought situations 				
Water Resources Data and Information Management <ul style="list-style-type: none"> -Establish a comprehensive water data system -Implement real-time data management system -Integrate data for adaptive management decisions -Establish accessible data management system 				
Establishment of Institution for Integrated Long-Term Water Management <ul style="list-style-type: none"> -Establish long-term guarantees for management -Establish institution to implement guarantees -Coordinate multiagency roles in management -Coordinate groundwater and surface water management -Establish incentives for cooperation/coordination -Establish a public awareness and education program 				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Establishment of Export Capacity Market -Establish procedures for allocation of export capacity -Establish institution to allocate export capacity -Coordinate water transfers and export capacity -Market export capacity for environmental benefits				
Integration of Land Use and Water Supply Planning -Coordinate land uses with water supplies -Encourage local determination of supplies available -Encourage local assessment of water supply reliability				
Installation and Operation of Flow Barriers -Install flow barriers to manage south Delta quality -Install weirs to control salinity intrusion				
Management of Agricultural Drainage -Implement source control regulations for pollutants -Implement pollutant-load limits in San Joaquin river -Reduce or control volume of agricultural discharges -Modify cropping and irrigation practices -export agricultural drainage to other watersheds -Retire lands with drainage disposal problems -Improve pest-control practices -Avoid use of high-salinity irrigation water -Manage irrigation tailwater to reduce pesticides -Manage drainage timing to reduce instream impacts -Treat drainage to remove salt or other pollutants -Dilute pollutants in Delta inflows from SJR using stored water				
Management of Urban/Industrial Drainage and Wastewater Discharge -Retain and manage stormwater runoff -Implement urban awareness/education programs -Treat discharges to remove problem constituents -Construct wetlands to treat wastewater effluent -Increase key nutrient inputs to estuary -Enforce wastewater discharge requirements -Prevent toxic discharges from industrial plants				

Categories and Actions	Fisheries and Diversions	Habitat and Land Use/ Flood Protection	Water Supply Availability and Beneficial Uses	Water Quality and Land Use
Dredged Material Management <ul style="list-style-type: none"> -Limit dredging to slack tides -Limit dredging to avoid fish migration periods -Use techniques to localize sediment movement -Dispose dredged materials at nonaquatic or other suitable sites -Remove contaminated sediments in critical habitat sites -Ensure material used for levee maintenance is noncontaminated 				
Management of Abandoned-Mine Drainage <ul style="list-style-type: none"> -Manage discharges from abandoned mines -Remediate abandoned mining sites discharging pollutants 				
Levee Maintenance and Stabilization <ul style="list-style-type: none"> -Maintain and stabilize existing levees -Modify agricultural practices to reduce subsidence -Use infilling to correct past subsidence -Implement uniform maintenance standards -Provide funding for maintenance and stabilization 				
Improvement of Flood Protection Levels and Seismic Stabilities <ul style="list-style-type: none"> -Reconstruct levees to higher design standards -Reconstruct levees to higher seismic standards -Relocate levees to more stable sites -Widen floodways to increase flood conveyance -Establish and manage flood overflow areas 				
Rerouting and Protection of Infrastructure from Flooding and Seismic Risks <ul style="list-style-type: none"> -Maintain/reconstruct levees around infrastructure -Reconstruct infrastructure to increase reliability -Relocate/reroute infrastructure 				
Establishment of Long-Term Funding Mechanisms <ul style="list-style-type: none"> -Establish a disaster contingency funding program -Establish a Bay-Delta financing authority -Provide low-cost debt financing for local agencies -Establish a bond financing mechanism -Establish a statewide water utility surcharge 				